

XIX.—*New South African Species of the Genus Chlenius* (Carabidæ). By C. N. BARKER, F.E.S. (of the Durban Museum).

THE types of these five species are contained in the Durban Museum Collection. Co-types of *C. orbiculicollis* (a male) and of *C. cavilabrum* (a female) are retained in the collection of the donor, the Rev. J. A. O'Neil, of Salisbury, S. Rhodesia. The other three species are unique.

Chlenius orbiculicollis.

Length $12\frac{1}{2}$ mm.; width 5 mm.

Briefly pubescent above, glabrous beneath; head and prothorax metallic greenish blue, shiny; elytra deep violaceous blue, less shiny, and with, on either side, a supra-apical orange subovate spot evenly rounded above, but a little irregular below, occupying intervals 4 to 7 inclusive. First three joints of antennæ and the palpi reddish testaceous, the remaining joints of antennæ black; labrum, mandibles basally, and margins of prothorax narrowly deep red. Legs testaceous yellow. Underside black, shiny, and iridescent.

Head short, broad, densely and evenly punctate, frontal foveæ subobsolete, transverse suture distinct; palpi: ♂ ♂ terminal joints all securiform, but maxillaries less widely; ♀ ♀ labials, securiform, maxillaries, short, explanate, and squarely truncate; antennæ: first three joints glabrous, the remainder pubescent and compressed.

Prothorax transverse ($3\frac{1}{2} \times 3$), densely, deeply punctate, apex truncate, frontal angles declivous, rounded, and not produced, sides ampliate, nearly evenly rounded from apex to base, hind angles obtusely rounded, outer margins very narrowly reflexed, the groove within shallow, base and apex about equal in width, the former emarginate, disc convex, median line indistinct, broadly depressed, but hardly foveate on either side of base.

Elytra oblong-ovate, alike in both sexes, base about one-third wider than prothorax at base, shoulders broadly rounded, widely margined, gently ampliated to beyond middle and rounded to, with the usual slight sinuation before, apex, a little convex above, briefly clothed with yellowish pubescence, deeply striate, intervals raised and a little carinate, densely and minutely punctate.

Underside glabrous, very shiny and iridescent, external parts remotely but deeply punctate; abdomen smooth, except for some superficial plications about lateral margins.

Nearly related to *C. marleyi*, Brkr., but a very distinct species. Comparing the two species "*orbiculicollis*" is more transverse; the prothorax is wider with the lateral margins more evenly rounded and there is no trace (though it is certainly very obscure in *marleyi*) of angulation near middle; the grooves within the reflexed margins are less deep, the hind angles are broadly rounded and not sinuately reflexed above. The head is shorter and broader, the puncturation stronger, and there is no smooth space on the vertex, the antennæ and palpi are less elongate, the coloration of the legs different, and the ♂♂ are not less ovate than the ♀♀, whereas in "*marleyi*" there is a considerable difference in in this respect.

Described from one male and one female example.

Hab. Salisbury, S. Rhodesia. Collected by the Rev. J. A. O'Neil.

Chlenius o'neili, sp. n.

Length 15 mm.; width 6 mm.

Black; head and prothorax æneous, the former broadly suffused with metallic green frontally, the latter less conspicuously within the lateral margins; outer margins of prothorax, legs, labrum, mandibles, palpi, and three first joints of antennæ reddish testaceous, the remaining joints of the latter deep brown and pubescent.

Head plane, irregularly, remotely punctate with some inconspicuous plications posteriorly, frontal foveæ obsolete, represented by two impressions impinging on the clypeal suture; palpi short, terminal joints gradually widened to apex and abruptly truncated.

Prothorax transverse, one-fourth wider than long, apex truncate, angles very declivous and briefly rounded; borders at apex narrowly reflexed and grooved, the grooves gradually widening towards and becoming obsolescent above hind angles: sides gently amplify to near middle, thence straightly but with a slight upturned sinuation contracted to the obtuse posterior angles; base wider than apex, very shallowly emarginate medially, and with some rather long sparse pubescence basally and laterally; disc anteriorly very finely vermiculate, becoming denser towards base and sides; median line distinct from apex to base, and with a seriate row of punctures on either side of it; basal foveæ broad and deep, rugosely punctate, as well as base between and to angles.

Elytra oblong-ovate, sparsely pubescent, denser marginally, forming a band, a little wider than prothorax at

base, shoulders sloping, sides very gently rounded to and a very little sinuate immediately before apex; striæ fine, intervals hardly raised, densely and more or less confluent punctulate.

Beneath glabrous, very shiny, with a few shallow remote punctures about the sternal parts.

The short robust palpi with widened, squarely truncate apices of the terminals places this species with *fulvipes*, Chd., and *simplex*, Wied., in Bonelli's group *Dinodes*. It is, however, very distinct from these species. In size, shape, and also sculpture it is hardly distinguishable from *C. bipustulatus*, Boh., which has also similar palpi and male anterior tarsi.

The three basal joints of the tarsi are very transverse, the first broadly triangular, second and third quadrate, and each of them of nearly equal length and width.

Described from a single male example captured by the Rev. J. A. O'Neil, after whom I have the pleasure of naming it.

Hab. Salisbury, S. Rhodesia.

Chlœnius cavilabrum, sp. n.

Length $15\frac{3}{4}$ –16 mm.; width 6– $6\frac{1}{2}$ mm.

Briefly pubescent; head and prothorax metallic green, the latter narrowly margined with red, and with the larger portion of the disc in centre and to base suffused with coppery bronze. Legs, labrum, palpi, and three first joints of antennæ testaceous yellow, the remaining joints of latter darker and pubescent. Elytra dull æneous, more or less suffusedly greenish laterally; a yellow marginal band extends from shoulder to apex, occupying the intervals to the eighth stria; below shoulder, for a short distance, it invades the interval, and at a point a little above the coalescence of the striæ posteriorly it is abruptly widened into an elongate patch occupying intervals 7, 6, and 5, and continues gradually attenuated to apex.

Head: sides and basal part coarsely irregularly punctate with finer punctures intermixed, front and vertex aciculate with a few remote punctures, neck smooth, frontal foveæ subobsolete, labrum short, smooth, truncate, with a broad saucer-like depression occupying the middle space; palpi elongate, cylindrical, the last joint a little shorter than the penultimate, the apices squarely truncated; antennæ long, filiform, setose, hardly compressed, three first joints glabrous, the remainder pubescent.

Prothorax transverse ($4\frac{1}{2}$ mm. \times $3\frac{1}{4}$ mm.), a little wider at

base than at apex, front nearly straight, angles rounded and declivous, sides very gradually amplified to middle, thence obliquely and slightly contracted to hind angles, which are bluntly right, base broadly, shallowly emarginate, disc coarsely, somewhat remotely punctate about centre, more densely at apex and very densely about base and in the depressions, a little convex, declivous frontally, median line short, shallow, reaching neither apex nor base, lateral foveæ moderately deep but not reaching base, lateral margins narrowly reflexed.

Elytra hardly wider than prothorax at bases, scutellum smooth, shoulders sloping, briefly amplified below, thence for two-thirds the length a little explanate, and below rounded without sinuation to apex, striæ narrow, moderately deep, not or hardly perceptibly punctate, intervals very slightly raised, densely shagreened, and briefly pubescent.

Underside piceous red; shiny, remote setose punctures on all the sternal parts, venter smooth impunctate, margins of prosternal process carinate.

This species has a very distinctive feature in the labrum, which, in each of the three female examples before me, has a conspicuous circular saucer-like depression which occupies the greater part of the middle space.

Like "*senegalensis*, Gory," "*cavilabrum*" is pubescent and similarly patterned, but both the author and Lacordaire place that species in the subgenus *Epomis* next to "*E. capensis*, Chd." If this be its correct position, "*cavilabrum*" is widely separated from it by the shape of its palpi, which are long and cylindrical like those of "*capicola*" and "*mendax*" of Chaudoir.

It is also considerably smaller than "*senegalensis*," and, judging by the description, for I have not seen the species, the prothorax is much wider at base.

Described from three female examples.

Hab. Salisbury (2) and Umtali, S. Rhodesia. Received from the Rev. J. A. O'Neil.

Chlenius (Epomis) alternatus, sp. n.

Length 17 mm.; width 7 mm.

Head and prothorax coppery, with green reflections in strong light about margins; elytra opaque æneous, merging into coppery metallic about base and sides, outer margins to the eighth striæ bordered with bright metallic green. First three joints of antennæ, palpi, and legs deep testaceous yellow; remaining joints of antennæ black and pubescent, epistome and mandibles reddish, piceous apically.

Head coriaceous, plicate-punctate on either side above eyes,

more regularly punctate posteriorly; frons and epistome with a shallow sulcation on either side; terminal joints of palpi gradually incrassate from bases and diagonally truncated; first three joints of antennæ smooth, with some spaced setæ on the upper side, joints beyond filiform, compressed, and pubescent.

Prothorax transverse (5 mm. by 4 mm.), densely rugose-punctate, about posterior margins and base the punctures more or less confluent, apex broadly emarginate, angles declivous, a little produced and rounded, sides very gently amplified to middle, then a little sinuately drawn in to base, which is about one-third wider than apex, hind angles obtuse, base sinuate on either side and conspicuously emarginate medially, disc a little convex, declivous frontally, median line narrow, reaching both apex and base, the lateral foveæ elongate and deep, but not quite reaching base.

Elytra oblong-ovate, at base very little wider than prothorax, bisinuate, humeral angles sharp, below amplified for a short distance and then very gently rounded to and hardly sinuate before apex, above a little convex, very declivous posteriorly, striæ closely punctate, the suture and alternate intervals a little more raised, all of them carinate and more or less regularly and finely seriate punctate in double lines.

Underside black, shiny, and a little iridescent, glabrous, but with some large superficial punctures on the prosternum and the metepisternal parts, and faint transverse aciculations on the sides of the venter.

Very distinct from any species known to me. The shape of the prothorax is similar to that of *C. cavilabrum*, mihi, a little more transverse and less declivous about sides of front. The elytra are also more ovate.

My only example is a female, but the labial palpi, though hardly securiform, are widely dilate and evidently entitle the species to be placed in or near the *Epomis* section.

The alternately raised elytral intervals, their seriate puncturation, and the bright metallic-green margins give the species some very striking characters.

Hab. Umtali, S. Rhodesia. Collected by A. Bodong, who (*teste* the Rev. J. A. O'Neil) had two examples in his possession, labelled *C. cupricollis*, a species I have no record of.

Chlanius salisburyensis, sp. n.

Length 12 mm.; width 5 mm.

Black, very shiny, apterous; head metallic green; prothorax purplish metallic with obscure greenish reflections

about disc, and more conspicuous within lateral margins; elytra very dark purple, less brightly metallic than prothorax, margins obscurely bluish green; base of mandibles, palpi, and two first joints of antennæ reddish testaceous, remaining joints of latter and the labrum picuous. Under-side and legs (except the tarsi, which are dark red) black.

Head aciculate and with some faint plications and punctures on either side above and between the eyes, frontal foveæ and transverse suture obsolete, the carinæ bounding the frons prominently developed; labrum very short and emarginate; mandibles elongate and hardly arcuate. Antennæ subfiliform, short (reaching about one-fourth the length of elytra), first joint swollen, as long as third, joints above third compressed, and very gradually widening to seventh or eighth.

Prothorax trapeziform, $3\frac{1}{2}$ mm. wide by $2\frac{1}{2}$ mm. long, truncate at apex, angles hardly produced, rounded, depressed, sides gently explanate to middle, thence straight to posterior angles, which are bluntly right, base broadly emarginate medially, disc a little convex, median line well defined, not quite reaching either apex or base, lateral basal sulci elongate, reaching base, lateral margins within reflexed borders, deeply sulcate, the grooves widening out posteriorly, disc aciculate and with more or less seriate lines of remote punctures running longitudinally on either side of middle line, becoming less regular and sparser outwardly, except in the marginal grooves, median part of apex, lateral basal sulci, and the base itself densely aciculate punctate.

Elytra soldered, base bisinuate, hardly wider than prothorax at base, scutellum broadly triangular, humeral angles sharp, subdentate, a little amplified for a short distance below, sides parallel for two-thirds the length and gently rounded to and hardly sinuate before apex; a little convex above, striæ sulcate, punctate, intervals costate, nearly smooth, the eighth narrower, carinate, and the space between it and the outer margins rugosely punctate, the ninth stria not reaching shoulder, very sparsely pubescent about apex and posterior margins.

Underside glabrous, with remote shallow punctures on all the sternæ, some coarser punctures on the presternum; venter smooth, except for some rugosities about sides of base.

It agrees well with the characters given by Laferté for his genus *Æacus* (*vide* vol. i. page 222, 'Genera des Coléoptères,' Lacordaire), especially in the shape of the mentum, which is exactly as he describes it: "dent médiane du menton

petite excavé tronquée au bout." Unfortunately, the author does not say whether his species is wingless or not. The species originally allocated to this genus, now relegated to the list of synonyms of *Chlœnius* are *C. carbonarius*, Dej., and *C. stygius*, Laferté, both from West Africa. As regards the abbreviated stria 9, which coalesces with the outer margin some distance below the shoulder, the same peculiarity occurs in *C. clarksoni*, mihi, which, though very different from "*salisburyensis*" in the shape of the mentum, has a facies on a larger, more robust scale, not unlike it, and it is also an apterous species. It appears best placed after *C. clarksoni*, mihi, or *C. cham*, Chd., and between them and the *Calathus*-like group of species, to which *C. piceus*, Chd., belongs. All these species are apparently wingless and approximate to the genus *Systolocranius*, Chaud., of the tribe Oodini.

Hab. Salisbury, S. Rhodesia. Collected by the Rev. J. A. O'Neil. A single female example.

I take this opportunity to correct some verbal errors which occurred in my paper on "New Species of *Carabidæ* from South Africa," which appeared in the January number of the *Ann. & Mag. Nat. Hist.* :—

ERRATA AND CORRIGENDA.

- P. 30, last line, for "extending" read "which extends."
 P. 31, first line, for "below it" read "below the widening."
 P. 37, under description of *Chlœnius durbanensis*, third line, after "pubescent" place a semicolon and after "beneath" eliminate comma.
 P. 38, under description of *Chlœnius marleyi*, paragraph Prothorax, last two lines, for "with deep basal foveæ" read "with a deep basal fovea."
 P. 47, under description of *Callistominus caffer*, Boh., second line, for "latter" read "former."

DR. WILLIAM CARRUTHERS.

We greatly regret to announce the death of Dr. William Carruthers at the age of 93. Dr. Carruthers was for forty-five years connected with the 'Annals,' and was always of great help in conducting the Magazine.—EDS.